

# AZ852

## MICROMINIATURE POLARIZED RELAY

### FEATURES

- Conforms to IEC60950/UL60950/EN60950 spacing and high breakdown voltage  
Supplementary insulation  
mains voltage 250 Vrms (SMT); 200 Vrms (THT)  
Pollution Degree 2 (external); 1 (internal)
- Monostable and bistable (latching) coil versions available
- High dielectric and surge voltage:  
2.5 KV surge (per Bellcore TA-NWT-001089)  
2.5 KV surge (per FCC Part 68)  
1,000 Vrms, open contacts
- Stable contact resistance for low level signal switching
- Epoxy sealed
- UL, CUR pending



### CONTACTS

<b>Arrangement</b>	DPDT (2 Form C) Bifurcated crossbar contacts
<b>Ratings</b>	Resistive load: Max. switched power: 60 W or 62.5 VA Max. switched current: 2.0 A Max. switched voltage: 220 VDC* or 250 VAC  * Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.
<b>Rated Load UL/CUR</b>	0.5 A at 125 VAC 2.0 A at 30 VDC 0.24 A at 220 VDC
<b>Material</b>	Palladium Ruthenium; gold clad
<b>Resistance</b>	< 50 milliohms initially at 20 mV, 10 mA

### COIL (Polarized)

<b>Power At Pickup Voltage (typical)</b>	79 mW (3–12 VDC) 98 mW (24 VDC)
<b>Max. Continuous Dissipation</b>	0.73 W at 20°C (68°F)
<b>Temperature Rise</b>	At nominal coil voltage 21°C (38°F) (3–12 VDC) 30°C (54°F) (24 VDC)
<b>Temperature</b>	Max. 115°C (239°F)

### NOTES

1. All values at 20°C (68°F).
2. Relay may pull in with less than "Must Operate" value.
3. Relay has fixed coil polarity.
4. Specifications subject to change without notice.
5. Ultrasonic cleaning is not recommended.

### GENERAL DATA

<b>Life Expectancy Mechanical Electrical</b>	Minimum operations 1 x 10 <sup>8</sup> 1 x 10 <sup>5</sup> at 0.5 A, 125 VAC, Res. 1 x 10 <sup>5</sup> at 2.0 A, 30 VDC, Res.
<b>Operate Time (typical)</b>	1 ms at nominal coil voltage
<b>Release Time (typical)</b>	1 ms at nominal coil voltage (with no coil suppression)
<b>Bounce (typical)</b>	At 10 mA contact current 1 ms at operate or release
<b>Capacitance</b>	< 2 pF at 10 KHz - coil to contacts < 1 pF at 10 KHz - between open contacts < 2 pF at 10 KHz - between contact sets
<b>Dielectric Strength (at sea level)</b>	See table
<b>Dropout</b>	Greater than 10% of nominal coil voltage
<b>Insulation Resistance</b>	10 <sup>9</sup> ohms min. at 25°C, 500 VDC, 50% RH
<b>Ambient Temperature Operating Storage</b>	At nominal coil voltage -40°C (-40°F) to 85°C (185°F) -40°C (-40°F) to 105°C (221°F)
<b>Vibration</b>	Operational, 20 g, 10–1,000 Hz
<b>Shock</b>	Operational, 50 g min., 11 ms Non-destructive, 500 g min., 0.5 ms
<b>Enclosure</b>	P.B.T. polyester, UL 94 V-0
<b>Terminals</b>	Tinned copper alloy, P.C.
<b>Max. Solder Temp.</b>	260°C (500°F)
<b>Max. Solder Time</b>	10 seconds
<b>Weight</b>	0.8 grams
<b>Packing unit in pcs</b>	50 per plastic tube, 1000 per carton box 1000 per reel, 1000 or 5000 per carton box

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## RELAY ORDERING DATA

NON-LATCHING VERSION				ORDER NUMBER		
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance Ohm $\pm 10\%$	THT	Gull Wing*	J-Leg*
1.5	1.13	3.4	16	AZ852N-1.5DE	AZ852G-1.5DE	AZ852J-1.5DE
3	2.10	6.8	64	AZ852N-3DE	AZ852G-3DE	AZ852J-3DE
4.5	3.15	10.3	145	AZ852N-4.5DE	AZ852G-4.5DE	AZ852J-4.5DE
5	3.50	11.4	178	AZ852N-5DE	AZ852G-5DE	AZ852J-5DE
6	4.20	13.7	257	AZ852N-6DE	AZ852G-6DE	AZ852J-6DE
9	6.30	20.4	574	AZ852N-9DE	AZ852G-9DE	AZ852J-9DE
12	8.40	27.3	1,028	AZ852N-12DE	AZ852G-12DE	AZ852J-12DE
24	16.80	45.6	2,880	AZ852N-24DE	AZ852G-24DE	AZ852J-24DE

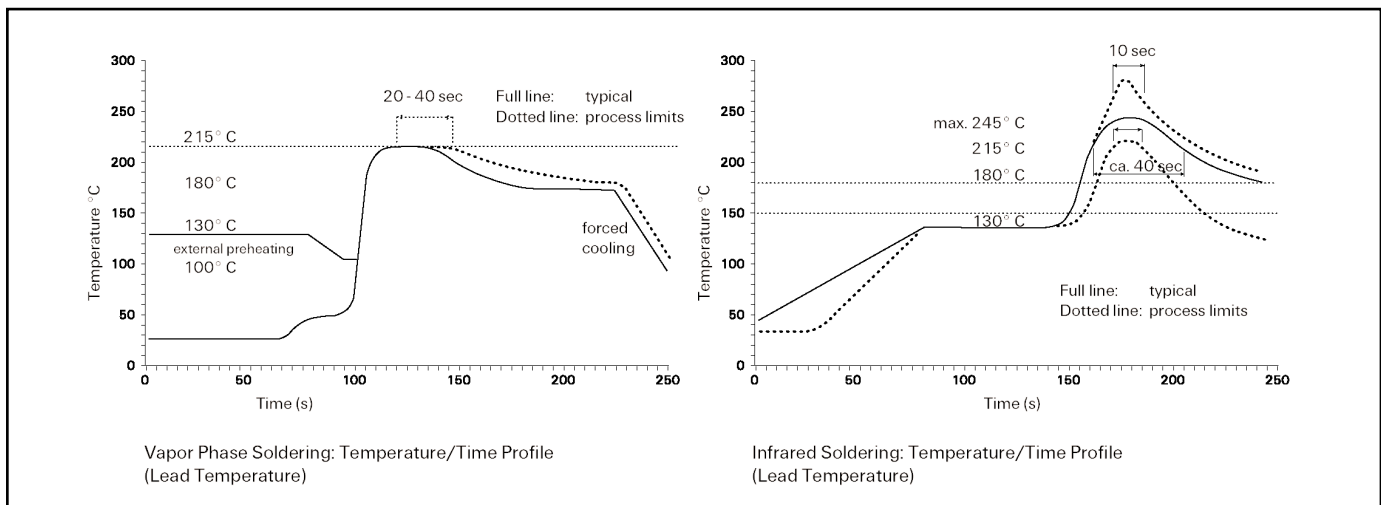
LATCHING VERSION				ORDER NUMBER		
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance Ohm $\pm 10\%$	THT	Gull Wing*	J-Leg*
1.5	1.13	4.1	23	AZ852PN-1.5DE	AZ852PG-1.5DE	AZ852PJ-1.5DE
3	2.25	8.1	90	AZ852PN-3DE	AZ852PG-3DE	AZ852PJ-3DE
4.5	3.38	12.1	203	AZ852PN-4.5DE	AZ852PG-4.5DE	AZ852PJ-4.5DE
5	3.75	13.5	250	AZ852PN-5DE	AZ852PG-5DE	AZ852PJ-5DE
6	4.50	16.2	360	AZ852PN-6DE	AZ852PG-6DE	AZ852PJ-6DE
9	6.75	24.2	810	AZ852PN-9DE	AZ852PG-9DE	AZ852PJ-9DE
12	9.00	32.3	1,440	AZ852PN-12DE	AZ852PG-12DE	AZ852PJ-12DE
24	18.00	41.9	2,880	AZ852PN-24DE	AZ852PG-24DE	AZ852PJ-24DE

\* Available only in Tape and Reel available (1K pcs/reel minimum)

	SURGE			
	VRMS, 1 min.	Peak (V)	Rise Time ( $\mu$ s)	Decay Time* ( $\mu$ s) (1/2 peak)
Between open contacts	1,000	1,500	2 (10)	10 (160)
Between contact sets	1,000	1,500	2 (10)	10 (160)
Between coil and contacts	1,800	2,500	2 (10)	10 (160)

\* Decay time measured from beginning of surge.

## Temperature Profile



Recommended Soldering Profile according CECC 00802

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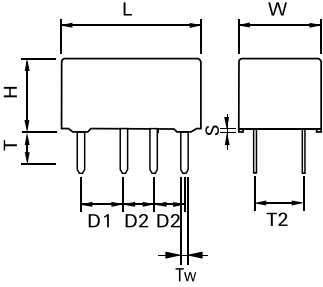
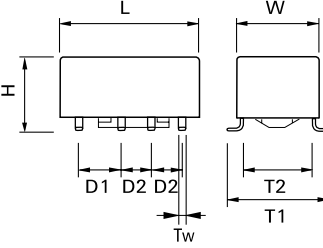
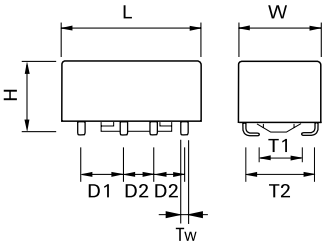
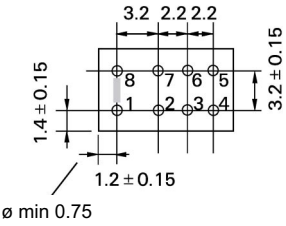
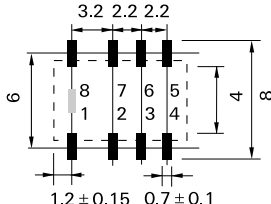
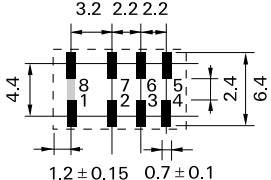
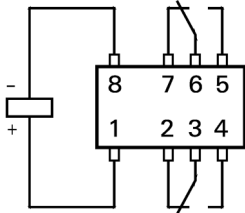
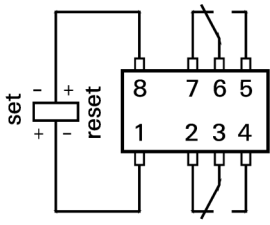
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## MECHANICAL DATA

<p><b>Narrow Version</b></p>  <p><b>Gull Wings</b></p>  <p><b>J Legs</b></p> 	<p><b>PC BOARD LAYOUT</b></p> <p><b>Narrow Version</b></p>  <p><b>Gull Wings</b></p>  <p><b>J Legs</b></p>  <p>VIEWED TOWARD TERMINALS</p>	<p><b>WIRING DIAGRAM</b></p> <p><b>Non-latching type not energized condition</b></p>  <p>TOP VIEW</p> <p><b>Latching type, 1 coil RESET condition</b></p>  <p>TOP VIEW</p>
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## DIMENSIONS

	NARROW		GULL WINGS		J-LEGS	
	mm	inch	mm	inch	mm	inch
L	10 ±0.08	0.393 ±0.003	10 ±0.08	0.393 ±0.003	10 ±0.08	0.393 ±0.003
W	5.7 ±0.3	0.224 ±0.012	6 ±0.08	0.236 ±0.003	6 ±0.08	0.236 ±0.003
H	5.85 -0.15	0.230 -0.006	5.65 -0.2	0.222 -0.008	5.65 -0.2	0.222 -0.008
T	3.2	0.125	N/A	N/A	N/A	N/A
T1	N/A	N/A	7.5 ±0.3	0.295 ±0.011	2.8 ±0.2	0.110 ±0.007
T2	3.2 ±0.1	0.126 ±0.006	5.08 ±0.1	0.200 ±0.004	5.08 ±0.1	0.200 ±0.004
D1	3.2 ±0.15	0.126 ±0.006	3.2 ±0.15	0.126 ±0.006	3.2 ±0.15	0.126 ±0.006
D2	2.2 ±0.15	0.087 ±0.006	2.2 ±0.15	0.087 ±0.006	2.2 ±0.15	0.087 ±0.006
Tw	0.4	0.015	0.4	0.015	0.4	0.015
S	0.3 ±0.05	0.011 ±0.002	N/A	N/A	N/A	N/A

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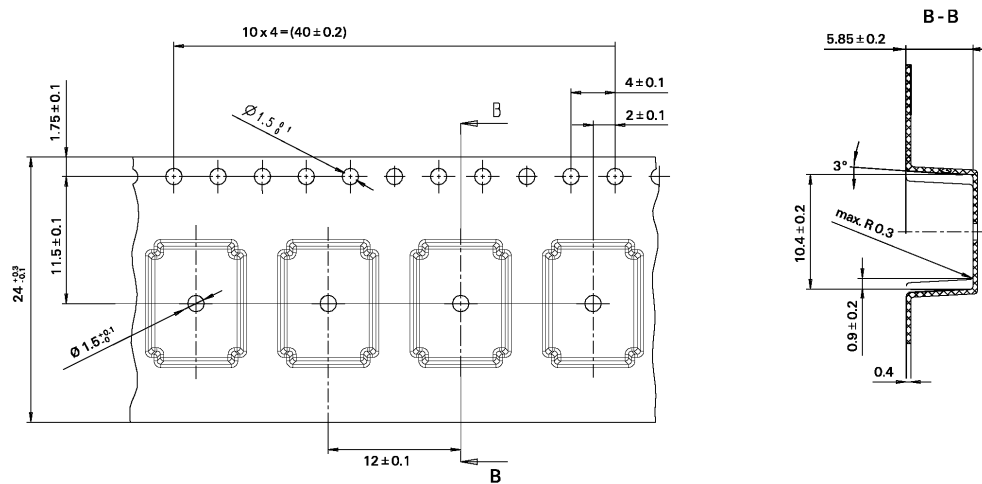
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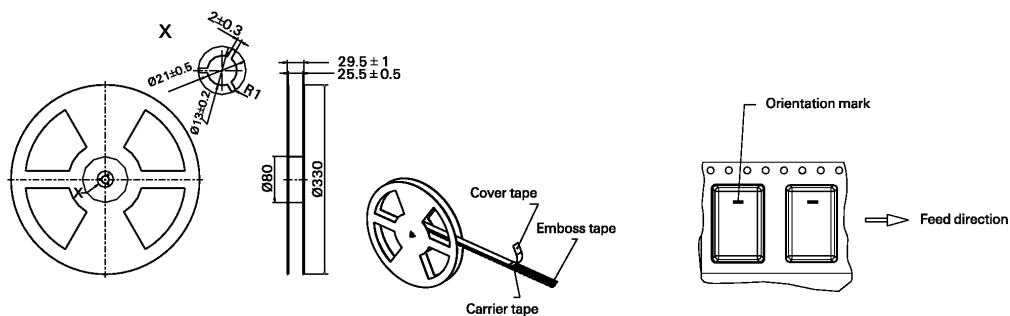
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## Packaging Specifications

Tape and reel for SMT version - 1000 relays per reel, 1000 or 5000 relays per box



## Reel dimension



Tube for THT version - 50 relays per tube, 1000 relays per box

